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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,693	02/13/2001	Shigeru Sugaya	7217/63766	4971

			EXAMINER
7590	01/26/2005		KHUONG, LEE T

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ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/782,693	SUGAYA ET AL.
	Examiner	Art Unit	
	Lee Khuong	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 October 2004_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1, 3-6, 9 and 11_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1,3-6,9 and 11_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _06 October 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings were received on 10/06/04. These drawings are acceptable.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanble

et al (6,084,888), hereinafter referred as Watanble.

        Regarding claim 1, Watanabe teaches a wireless transmitting method comprising *the*

steps of building a monopayload packet (see Fig. 2, **an ATM frame 100 which contains only**

one real ATM CELL 1, with a header 121, a single payload 125 and dummy cells making

up for insufficient cells are inserted for the frame 100 to be transmitted) *having one of*

predetermined information units of the information as a data payload (see col. 4, lines 11 – 15

and col. 5, lines 58-62, *a frame has a single packet),*

        constituting a multipayload packet having a plurality of predetermined information units

of the information as a data payload (see Fig. 2, col. 5, lines 27-38, **a second ATM frame 100**

which contains multiple ATM cells as in Fig. 2 which comprises a frame header part 104

and a frame payload part 105, in which the frame payload part 105 contains multiple

payloads, 126-128),

adding a predetermined preamble to form a wireless packet to each packet of the

monopayload packet to form a wireless packet or to the multipayload packet to form a wireless

packet (see col. 5, lines 13 – 16, **add a preamble to a frame**), and

carrying out the asynchronous transmission by wireless packet obtained by combining

the monopayload packet with the multipayload packet depending on a length of the information

to be asynchronously transmitted by wireless (see col. 4, lines 53 – 67 and col. 5, lines 1 – 9, **the**

monopayload frame and the multipayload frame are transmitted together by a wireless

base station as in Fig. 3, 706).

Regarding claim 3, Watanabe teaches the wireless transmitting method according to

claim 1, further comprising the steps adding common header information to the monopayload

packet and the multipayload packet (see col. 5, lines 6 – 9, **compiling headers of cells with no**

redundancy information) and decoding the header information to make a state of succeeding

data payload packets decidable by a communicating station of destination (see col. 5, lines 17 –

22, **the transmitted frame established frame synchronism and the header information is**

decoded for FEC to perform error correction).

Regarding claim 4, Watanabe teaches the wireless transmitting method according to

claim 1, further comprising the step of describing a number of predetermined information units

included in the multipayload packet as common header information in the multipayload packet

so that the number of continuous information units is specified (see Fig. 2, 102, **frame control**

information or Fig. 4, 417, **apparatus of the frame control information 102 in Fig.** 2, col. 6,

lines 6 – 9, **the frame control information generates a sequence number,** *a number of*

predetermined information units, **for the transmission frame)·**

        Regarding claim 5, Watanabe teaches the wireless transmitting method according to

claim 1, further *comprising the step of adding a sequence number to the monopayload packet*

and obtaining the multipayload packet by adding the number for each increase in the

information unit included in the packet (see col. 6, lines 6 – 9, **sequence number includes in**

each frame)·

                    Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

>   (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>   section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
>   such that the subject matter as a whole would have been obvious at the time the invention was made to a person
>   having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
>   manner in which the invention was made.

5.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view

of Raychaudhuri et al. (5,684,791), hereinafter referred as Raychaudhuri.

        Regarding claim 6, Watanabe teaches the wireless transmitting method according to

claim 1, further comprising *the steps of adding an error detection code or an error correction*

code to the monopayload packet and the multipayload packet by said information unit for transmission (see col. 5, lines 10 – 14, **adding FEC to the header part and the payload part**).

Watanabe does not expressly teach *retransmission is required for each information unit having an error.*

However, retransmission for a lost cell/packet (*for each information unit having an error*) is well known in the art for ensuring quality-of-service in wireless ATM transmission as evidenced by Raychaudhuri.

Raychaudhuri teaches *retransmission is required for each information unit having an error* for an ATM cell with an automatic repeat request, ARQ procedure, (see Fig. 3B, col. 8, lines 40-49, **retransmission for a loss ATM cell with ARQ procedure**).

One skilled in the art would have recognized the advantage of using the ARQ procedure as taught by Raychaudhuri in the system of Watanabe for the purpose of ensuring quality-of-service in wireless ATM transmission.

Thus, it would have been obvious to one skilled in the pertinent art at the time the invention was made to apply Raychaudhuri's teaching of retransmission of an ATM cell in the system of Watanabe for the purpose of ensuring quality-of-service in wireless ATM transmission.

6.   Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Sugita, (6,430,158).

Regarding claim 9, Watanabe teaches a wireless transmitter for forming a wireless

network to carry out asynchronous transmission of information by using plurality of

communicating devices, the transmitter comprising *dividing means for dividing asynchronous*

information to be transmitted by wireless into corresponding information units (see Fig. 3, col. 5,

lines 3 – 10),

monopayload packet building means for building a monopayload packet having one

predetermined information units as a data payload (see Fig. 3, part 713, col. 5, lines 3 – 10),

multipayload packet building means for building a multipayload packet having a

plurality of predetermined information units as a data payload (see Fig. 3, part 713, col. 5, lines

3 – 10),

header adding means for adding header information describing a type of payload packet

to the monopayload packet and to the multipayload packet, (see Fig. 3, part 711, 712, 713, col. 5,

lines 1 – 10),

wireless packet building means (see Fig. 3, the below expanded detail picture of the

baseband part, 704) *for building a wireless packet by combining the monopayload packet with*

the multipayload packet depending on a length (each payload of an ATM cell is 48 bytes and the

total number of payloads in an ATM frame are being depend on how much the overhead

preamble, headers, FEC are being used) *of the asynchronous information to be transmitted by*

wireless, whereby the asynchronous transmission is carried out by the wireless packet (see Fig.

3, col. 4, lines 53 – 67 and col. 5, lines 1 – 9),

preamble adding means in that a predetermined preamble to each packet to form the monopayload packet and multipayload packet (see Fig. 3, 715, **preamble adding means**, col. 5, lines 13-16).

Watanabe does not expressly teach *access control means for carrying out wireless transmission control using the preamble information by an access control signal sent from a control station, whereby the wireless packet is transmitted by wireless using the access control means.*

However, *access control means for carrying out wireless transmission control using the preamble information by an access control signal sent from a control station, whereby the wireless packet is transmitted by wireless using the access control means* is well known in the art for synchronizing transmission as evidenced by Sugita.

Sugita teaches *access control means* (Fig. 3, 20, **First Wireless Communicating Station**, and 30, **Second Wireless Communicating Station**) *for carrying out wireless transmission control using the preamble information by an access control signal sent from a control station* (Fig. 2, 10, **control station**), *whereby the wireless packet is transmitted by wireless using the access control means* (see col. 4, lines 54-64).

Regarding claim 11, Watanabe and Sugita teaches the wireless transmitter according to claim 9. Watanabe further teaches *receiving means for receiving an access control signal sent from a control device of the wireless network* (see Fig. 3, 705, col. 5. lines 17 – 19),

access control signal decoding means for decoding the access control signal (see Fig. 3, 721, col. 5, lines 19 – 20), and

deciding means (Fig. 3, 704) *for deciding that the relevant access control signal is for its own station, whereby the wireless transmission of the wireless packet is started using the deciding means* (see col. 5, lines 43 – 62).

Response to Arguments

7. Applicant's arguments filed 10/06/04 have been fully considered but they are not persuasive.

In response to Applicant's argument that "Watanble et al. fails to show the asynchronous transmission of a wireless packet obtained by combining a monopayload packet with a multipayload packet depending length of information to be transmitted. Watanble et al. merely setting optimal length of the packets forming a transmission frame so as required. Applicant's attention is directed to Fig. 2, *the steps of building a monopayload packet* (see Fig. 2, **an ATM frame 100 which contains only one real ATM CELL 1, with a header 121, a single payload 125 and dummy cells making up for insufficient cells are inserted for the frame 100 to be transmitted**) *having one of predetermined information units of the information as a data payload* (see col. 4, lines 11 – 15 and col. 5, lines 58-62, *a frame has a single packet*),

constituting a multipayload packet having a plurality of predetermined information units of the information as a data payload (see Fig. 2, col. 5, lines 27-38, **a second ATM frame 100 which contains multiple ATM cells as in Fig. 2 which comprises a frame header part 104 and a frame payload part 105, in which the frame payload part 105 contains multiple payloads, 126-128**),

carrying out the asynchronous transmission by wireless packet obtained by combining

the monopayload packet with the multipayload packet depending on a length of the information

to be asynchronously transmitted by wireless (see col. 4, lines 53 – 67 and col. 5, lines 1 – 9, **the**

monopayload frame and the multipayload frame are transmitted together by a wireless

base station as in Fig. 3, 706). The more redundant cell headers are eliminated in the combined

frame, the more payload units, the frame can pack in; therefore, the length of a payload frame is

being depended on the eliminated redundant headers information.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Fujimori et al. (6,243,395), discloses a method and system to transfer ATM cells via 1394

serial data bus.

Petersen et al. (5,802,051), discloses a method and system that multiplex voice and data

in ATM minicells.

Sugita et al. (6,545,999), discloses a method and system that transmit signal for state

changes between a communicating station and a control station.

Sugita et al. (6,542,495), discloses a method and system that transmit control signal

between a communicating station and a control station to control access right of the

communicating station corresponding to a priority level assigned to the communicating station.
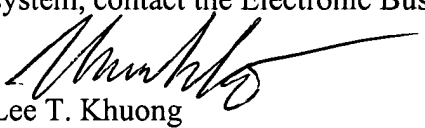
Bentall et al. (6,728,921), discloses a cell based data transmission method.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lee Khuong whose telephone number is 571-272-3157. The

examiner can normally be reached on 9AM - 5PM.

10.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

11.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lee T. Khuong
Examiner
Art Unit 2665

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600